DOCUMENT RESUME

ED 417 380 CS 013 107

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TITLE Full-Day Kindergarten vs. Half-Day Kindergarten: The Outcome of First Grade Reading Achievement.
PUB DATE 1998-05-00
NOTE 48p.; M.A. Research Project, Kean University.
PUB TYPE Dissertations/Theses - Masters Theses (042) -- Reports - Research (143)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Comparative Analysis; *Full Day Half Day Schedules; *Grade 1; *Kindergarten; Kindergarten Children; *Portfolio Assessment; Primary Education; *Reading Achievement; Reading Research; School Schedules; Spelling; Time Factors (Learning)
IDENTIFIERS East Brunswick School District NJ

ABSTRACT

This study examined the hypothesis that children who had participated in a full-day kindergarten program would not show a significantly higher academic achievement in first grade as measured by the standardized portfolio assessment than children who participated in a half-day program. The study compared four portfolio assessment scores of two groups of first grade students in the East Brunswick Public School District (New Jersey). The first group consisted of 16 children who participated in a full-day kindergarten program, and the second group consisted of 61 children who participated in a half-day kindergarten program. Results showed that the full-day kindergarten sample scores were higher in all areas than the half-day kindergarten sample, however, only significantly higher in one area--the Developmental Spelling Assessment subtest of the standardized portfolio. Findings suggest support for the hypothesis. (Contains 5 tables of data, 4 footnotes, and 31 references; related research and 10 pages of scores are appended.) (Author/CR)

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ED 417 380

Full-Day Kindergarten vs. Half-Day Kindergarten : The Outcome of First Grade Reading Achievement

by
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In Partial Fullfillment of the Requirements
for the Master of Arts Degree

Kean University

May, 1998

CS013107

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Abstract

This study compared 4 portfolio assessment scores of two groups of first grade students in the East Brunswick Public School District. The first group consisted of 16 children who participated in a full-day kindergarten program and the second group consisted of 61 children who participated in a half-day kindergarten program. It was hypothesized that children who participated in a full-day kindergarten program would not show a significantly higher academic achievement in first grade than children who participated in the half-day kindergarten program.

The results of the data showed that the full-day kindergarten sample scores were higher in all areas than the half-day kindergarten sample, however only significantly higher in one area. The findings of this study support the hypothesis.

Acknowledgments

I would like to thank my entire family for all of their continued support throughout writing this thesis. I would like to especially thank my sister, Jill, for all of her time and help with all of the proofreading and typing. I am also grateful to my family for all of their encouragement to continue my education.

A special thanks to my 3 wonderful colleagues; Jane, Laurie, and Debra, for all of their support and time compiling all of the data.

I would like to thank my friend, Michele for being a great Kean University partner. It was so nice to have a friend to take all of my classes with. Her support throughout this project was appreciated.

I would like to also express my thanks to Dr. Mazurkiewicz for all of his guidance throughout this project.

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The majority of 5 year olds in the United States today have attended some type of pre-school and are accustomed to being away from home (Herman, 1984). Those children who have had pre-kindergarten experience have probably overcome separation anxiety, have learned to interact with other children and adults, and have developed many of the cognitive skills necessary for a more formal classroom structure. Thus kindergarten must assume a more demanding function to these children. However, there are still children in the U.S. who have had no pre-kindergarten experience. These children may need to be exposed to activities similar to pre-kindergarten programs prior to receiving any type of formal training. Therefore, today's kindergarten programs focus on social, physical, and cognitive areas of learning. They must also provide more individualized instruction time and early intervention with those children who need remediation (Naron, 1981). Can all of these important areas of learning be covered in a half-day program, or is a full-day program necessary?

The discussion of full-day kindergarten versus half-day has generated arguments from administrators, teachers, and parents as well as child psychologists and developmental specialists (Harding, 1988). The controversy has continued throughout the years until present time.

A three year longitudinal investigation of middle class and disadvantaged lower class pupils was done by Johnson in 1974. She found no significant differences between students who attended full-day versus half-day kindergarten programs when the *Walker Readiness*

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test and the *Stanford Early School Achievement Test* were given at the end of first and second grades.

McClinton and Topping did another study in 1981 to examine the effects of what time spent in kindergarten had on children. The curriculum content was the same in the half-day program as in the full-day program and only differed in the amount of time the children were in school. There were no significant differences found in the levels of achievement in the two groups at the end of kindergarten or in first grade. Clearly this research showed that by extending the school day the children would not necessarily achieve more positive results. The additional time spent in the kindergarten class must be used well in order to make a difference.

Contrasting studies have been done as well. The results from full-day and half-day programs in both Nasssua County, New York (Tirens, 1984) and in the Chicago Public Schools (Chicago Public Schools, 1985) favored the full-day kindergarten. The increased length of time allowed for expanded readiness programs and increased quantity of teacher time (Sergeskitter, Gilman, 1988).

In reports of studies by Hills (1985) and by Stinard (1982), results favored the full-day kindergartens. In the six studies listed by Hills (1985), higher scores in academic achievement were reported for full-day students. "The lack of significant effects for additional time is consistent with the research on the effects of allocated time on achievement" (Karweit 1983, 1988; Berliner, 1990). Lengthening the school day may provide more opportunities for learning, however the

actual use of time continues to be a major issue. For example, Meyer (1985) found that some half-day programs provided more high quality time than did full-day programs.

Followers of kindergarten trends report that changing the length of the kindergarten day may not be as important as making sure that all kindergartners are provided with developmentally and individually appropriate learning environments, regardless of whether these programs are full-day or half-day.

Hypothesis

Additional research on this controversial subject is necessary since prior results are equivocal. The following study was established to test the hypothesis that children who have participated in a full-day kindergarten program would not show a significantly higher academic achievement in first grade as measured by the standardized portfolio assessment than children who participated in a half-day program.

Definitions

Half-Day Kindergarten Program- The child attends school every day for 2 1\2 hours.

Full-Day Kindergarten Program- The child attends school every day for 6 hours.

Procedures

The research was conducted in one school in the East Brunswick Public School System, which is located in an upper-middle

class suburban community in central New Jersey. The study used four sections of a "standardized" portfolio. They were: *Sight Vocabulary, Developmental Spelling Assessment, Running Record, and a Reading Readiness Inventory*. All of these sections were given in the fifth month of first grade in four first grade classrooms.

1. Sight Vocabulary - This was used to establish that the student is successfully accumulating an age appropriate sight vocabulary. In this test there was one list of words on a sheet of paper, in order of difficulty. The directions indicate that the words can be written on an index card for the child to read. While the child is reading the words, the teacher records the responses by using a plus sign for the correct response and a minus sign for the incorrect response. When the child misses three to four words in a row, the teacher can use her judgement and stop the testing and record the number of correct responses on the top of the paper. This section of the portfolio is done one-on-one.

2. Developmental Spelling Assessment - The DSA established a student's progress as he or she moves through the developmental spelling stages. This section of the portfolio is administered as a whole class activity. The students are given a piece of paper with 12 numbered spaces going down the paper. The students are instructed to listen carefully to the word that the teacher dictates, and they should try to write the word. The teacher says the word, puts it into a sentence, and then repeats the word. A sample is done for the class. The teacher will collect the papers and score them

according to the scoring guide. There are 5 levels. They are :

1. Precommunicative
2. Semiphonetic
3. Phonetic
4. Transitional
5. Correct

3. Running Record - A running record is a way of looking more closely at what a young child is thinking and doing as he or she reads. This section of the portfolio is given one-on-one. The teacher chooses a level from a benchmark list that is appropriate for the child's reading level. The teacher introduces the book title, author, and difficult names of the characters. The child is then instructed to read the book and the teacher should remind the student to use reading strategies that were taught. The strategies can be reviewed if needed. The teacher follows along as the child reads, using a prepared sheet of paper with the story printed on it. The teacher records all of the student's miscues on the printed text, using the running record code. Comprehension questions are asked at the end of the story. The purpose of the running record is to find the student's instructional level.

4. Readiness Inventory - Word Analysis Inventory, Section C, was used. The purpose of this section is to identify the student's understanding of vowels, blends, digraphs, and endings. There are specific teacher directions provided and used as the test is being administered with each student one-on-one. The teacher records all responses.

These 4 sections of the portfolio were given to all of the students in the four first grade classes. These scores were compiled and are the means of the samples, full-day versus half-day kindergarten attendees, and were analyzed for significance of differences using t tests.

Results

The scores of 4 sections of a reading portfolio assessment were studied and compared to determine relationship between first grade students who attended a full-day kindergarten program and first grade students who attended a half-day kindergarten program. The mean scores and standard deviations were calculated for each section. Student's t was used to determine if there was a significant difference between the means of the two groups.

As can be seen in Table One, the results of the sight vocabulary

Table I

Comparison of half-day vs. full-day achievement on sight words

Samples	**M**	**SD**	**t**
Half-day kindergarten	75.93	26.50	-1.94
Full-day kindergarten	89.56	18.02	

Almost significant .05 level

scores showed that their was almost a significant difference between the two samples at a .05 level. There was a 13.63 point mean difference in favor of the students who attended full-day kindergarten.

Table Two, showing a comparison of the reading readiness

Table II

Comparison of half-day vs. full-day achievement on readiness inventory

Samples	M	SD	t
Half-day kindergarten	28.82	13.44	1.85
Full-day kindergarten	35.44	9.37	

NS

inventory sample, indicate that there was a mean difference between the samples of 6.62 points in favor of the full-day sample. Raw scores were used to establish the results on the readiness inventory. However, t of 1.85 was not significant.

Table Three shows a comparison of sample means on the

Table III

Comparison of half-day vs. full-day achievement on Developmental Spelling Assessment

Samples	M	SD	t
Half-day kindergarten	3.54	.88	-2.24
Full-day kindergarten	4.06	.57	

Significant <.05 level

Developmental Spelling Assessment subtest of the standardized

portfolio. There was a significant difference, below the .05 level, favoring the students who attended the full-day kindergarten. The students were given a raw score of 1-5 (5 being the highest for the first grade).

The percentage of accuracy of the running records between the

Table IV

Comparison of half-day vs. full-day achievement on running record

Samples	M	SD	t
Half-day kindergarten	87.61	14.85	-1.88
Full-day kindergarten	94.75	5.67	

NS

samples, as detailed in Table Four, showed no significant difference between the two samples. The mean value was in favor of the full-day kindergarten students by 7.14 points.

Table Five provides the data on the comparison of the samples

Table V

Comparison of half-day vs. full-day achievement of comprehension

Samples	M	SD	t
Half-day kindergarten	82.72	30.39	-.76
Full-day kindergarten	89.06	27.33	

NS

ability on the measures of comprehension of the portfolio assessment. The comprehension results showed no significant difference between the two samples. Again, the mean score was in favor of the full-day kindergarten sample by 6.34 points.

Conclusions and Implications

The results of this study permitted the acceptance of the hypothesis that children who participated in a full-day kindergarten program would not show higher achievement on the portfolio assessment in all areas tested in first grade when compared to children who participated in half-day program. The mean scores of all 5 areas tested were in favor of the full-day kindergarten. The full-day kindergarten program appeared to have a positive effect on first grade reading achievement although there was only one significant t and that in spelling, and an almost significant difference in the sight vocabulary. These conclusions were similar to the 1990 study that was done using six measures of the CAT by Holmes and McConnell.

Since the current study was limited to only the effects of half-day vs. full-day schooling, a future study is recommended to look at other important factors that could effect the reading achievement between the two samples. These other factors are pre-school experience, IQ scores, the curriculum, the quality of time spent with the children, and the use of a larger sample.

Kindergarten Programs: Related Research

The first kindergarten program was founded by Friedrich Froebel in Germany in 1837. Froebel's ideas then influenced the development of kindergarten education in the US years later. The first private kindergarten was established in Wisconsin in 1855 and the first public school kindergarten was established in St. Louis (Hill, 1967). Froebel's kindergarten functioned as a 2 hour a day program in the afternoon. He did not focus his attention on the length of the school day at this time. When kindergarten began in the US however, it was a full-day program. During World War II, most of the kindergarten programs were cut to half-day programs to accommodate more children due to the teacher shortage and lack of classroom space. Full-day programs then made a comeback in the 1960's and 1970's (Oelerich, 1979).

The trend is again for full-day kindergarten nationally. From 1969-1982, the children enrolled in the full-day program rose from less than 10% to over 30%. By 1989, nearly half the kindergarten age children in the US were enrolled in full-day programs (Olsen and Zigler, 1989). According to Karweit, 1992, 58% of kindergartners attended half-day programs, and then in 1994, about 54% of kindergartner teachers taught full-day classes and about 1/2 of kindergarten children attended full-day (Smith, 1994). American society and education has changed over the last twenty years. The need for a full-day program is becoming more evident due to an increase in single parent and dual employment households. Studies have shown that parents favor a full-day program because it would

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reduce the number of transitions kindergartners experience (Housden and Kam, 1992; Johnson, 1993).

According to many experts who favor full-day programs, a five year old's brain is most receptive to learning, and children at this age can be exposed to a broader curriculum in a full-day program (Gorten and Robinson, 1968). However, Hoffman and Daniels in 1986 found that half-day and full-day programs were more similar than different in what and how they were taught.

Controversy on the debate of full-day and half-day kindergarten programs continues today. Much of the controversy lies on the research studies themselves. Proponents of the full-day program continue to find positive findings in research. On the other hand, skeptics emphasize the inconclusiveness or lack of significant gains indicated in the research.

In 1980, a study was done by Adcock to determine the academic effects of the length of a school day on 189 kindergartners in 5 selected schools in Maryland. There were 58 control group children who attended the half-day program while 131 children attended a full-day program. The children were selected randomly. The Survey Battery of the Metropolitan Achievement Tests (1978) was administered to these kindergarten children by their teachers. The data collected was analyzed for each subtest area (ie.,) math, reading, and language skills and the total composite scores were taken from the standard scores reported by the test manufacturer. The full-day kindergarten group scored higher than the half-day group to a

statistically significant degree (p. .001) in every considered category. These results demonstrate that children who attended a full-day kindergarten program achieve higher academic skills in math, reading, and language than the children who attend a half-day program.

A longitudinal study of the effectiveness of full-day kindergarten was published in 1983. The Evansville-Vanderburgh School Corporation began a full-day kindergarten program in four schools in the 1978-1979 school year and continued the program in 1979-1980. The children in these four schools were compared with a control group from four other schools that had a half-day kindergarten program. Standardized tests, report cards, questionnaires, and interviews were used as data. The participants were third and fourth grade students that were enrolled in the school at which they had attended kindergarten, their parents, and their teachers.

The 1980 study showed that the full-day kindergarten children scored significantly higher than the half-day kindergarten children on the Boehm Tests of Basic Concepts and the Gates-MacGinitie Reading Tests in first grade and scored significantly higher in most of the readiness test areas of the California Achievement Tests.

Teachers were given an opinionnaire to complete. The majority of the teachers indicated that full-day kindergarten was superior to half-day kindergarten. They felt that the full-day kindergarten programs offered more time to develop basic listening and language skills, that students had been used to a more in-depth skills program, and that the students did not appear to be bored. The teachers also felt

that the full-day kindergarten children socialized better with their peers and they were excited about coming to school.

Parents were asked to complete a questionnaire. The results were; Most parents felt that their children learned more in the full-day kindergarten program; were better prepared for first grade; learned more self control; became more socially adjusted; gained more self-confidence; became better listeners; were more able to express themselves; were better able to follow directions; learned to enjoy music; had improved handwriting, cutting, and coloring skills; were better prepared for reading and mathematics; developed better body coordination; and had better home-school relationships (Humphrey, 1983).

This study clearly shows many reasons to support the need for a full-day kindergarten program. However, they also had some concerns about adding full-day kindergarten programs.

1. The cost is high. Teachers and assistants should not be added at a time when schools are in economic decline.
2. The full-day program is another example of government taking over tasks from parents rather than parents taking the responsibility to help provide an enriched background for their children prior to first grade.

3. The full-day program puts too much pressure on five-year old children, and there is no evidence that all the money and effort can result in better success in school.

According to this 1980 study, there were differences at the end of kindergarten and first grade between children who attended full-day and half-day kindergarten, and those differences in favor of the full-day kindergarten children continued into the third and fourth grades. One may conclude from this study that there are lasting effects for children who attend full-day kindergarten.

A quasi-experimental study explored the ways in which the full-day kindergarten program is beneficial and/or detrimental to students compared to the half-day and/or extended-day program (Hough, Byrde, 1996). The sample consisted of six full-day schools and six half-day schools. They were selected by the Springfield, Missouri Public schools based on geographic location, school size, student norm-referenced test data, and socio-economic status of patrons.

In this study, the following research questions were addressed:

1. How does length of school day affect kindergarten curricula and instruction?
2. Do students attending full-day kindergarten experience more fatigue than students attending half-day?

3. Does length of school day affect kindergarten student socialization skills?
4. Do kindergarten students score higher on criterion-referenced measures when attending full-day rather than half-day?
5. Do kindergarten students score higher on norm-referenced achievement tests when attending full-day rather than half-day sessions?
6. What do parents and teachers of kindergarten students view as benefits or shortcomings to children who attend full- or half-day programs?
7. Do attendance patterns differ among full-, half-, and extended-day students?

A number of qualitative and quantitative methodologies were employed to address the research questions posed by this quasi-experimental study. The methods that were used to collect data were; observations, kindergarten students' focus group, teacher focus group, parent focus group, criterion-referenced measures and survey questionnaires, and student norm-referenced achievement test.

The findings were as follows:

1. The length of school day has not significantly altered the curriculum, however, certain instructional approaches differ. The full-day

programs tended to utilize more small group activities than half- or extended-day programs.

2. There was no significant evidence found that fatigue was a factor in the full-day program.
3. A significantly greater number of child-to-child social interactions are taking place in the full-day program when compared to the half-day program.
4. Data showed that full-day kindergarten students outperformed half-day students on 8 of the 9 language arts criteria. Three of the criteria differences were not statistically significant. Full-day kindergarten students outperformed half-day students on 8 of the 11 criteria. Of the remaining three, one criterion indicated no difference, and the other 2 were not significant. Of the 13 criteria used to measure mathematic skills, only 2 statistically significant results were found, both favoring full-day students.
5. Full-day students scored higher on every criterion measured by the Early School Assessment norm-referenced achievement test than half-day students.
6. Overall satisfaction was higher for parents of children attending full-day and extended-day

programs. These parents believed that their children were better prepared for first grade and noted that teachers give more suggestions and ideas to use at home.

Although the parents of the half-day program were satisfied, they would have preferred the full-day option. They felt at times their children were rushed. Many parents were pleased to have their children home for half-day.

Parents of the extended-day program were generally pleased, but many stated they would have preferred the full-day.

There were parents who were against full-day programs because they wanted to spend more time with their child and wanted a choice of types of programs their child could attend.

Teachers in the half-day program were concerned about their large class size and felt that they were rushed and the children would not benefit from the half-day program. Teachers of the extended-day program said that the children wanted to stay for the rest of the day. Teachers of the full-day program felt they had more time to spend on activities and the children had time to be successful.

7. Full-day kindergarten students attended school more regularly than either half- or extended-day students.

   Students attending the full-day kindergarten program were able to experience a wider range of benefits than half- or extended-day students. The scientific evidence provided in this study favors full-day on virtually every dimension.

Research studies confirm that attendance in full-day kindergarten programs result in academic and social benefits for primary grade children (Cryan et al., 1992; Karweit, 1992). Early studies appeared to offer very little reliable evidence one way or the other because they used unique populations or small samples, failed to use strong standards, or concentrated on only academic outcomes rather than social outcomes.

Cryan (et al. 1992), are a few of the researchers who have found a broad range of effects, including a positive relationship between participation in full-day kindergarten and later school performance. After comparing similar half-day and full-day kindergarten programs in a statewide longitudinal study, Cryan et al. found that,

> *"Kindergartners exhibited more independent learning, classroom involvement, productivity in work with peers, and reflectiveness than half-day*

> *kindergartners. They were also more likely to approach the teacher and they expressed less withdrawal, anger, shyness, and blaming behaviors than half-day kindergartners."*[1]

Similar results have also been found in other studies (Holmes and McConnell, 1990, Karweit, 1992). These positive effects and academic gains in the first years of school support the value of developmentally appropriate full-day kindergarten programs.

Observers of trends in kindergarten scheduling argue that changing the length of the kindergarten day begs the underlying issue: creating developmentally and individually appropriate learning environments for all kindergarten children and preparing them for first grade, regardless of the length of the school day (Karweit, 1992, Katz, 1995).

According to Rothenberg (1995), full-day kindergarten allows children and teachers time to explore topics; provides more class time; provides more continuity of day to day activities; and provides an environment that favors a child-centered approach. Recent research indicates that,

> *"compared to children in didactic programs, children in child-centered kindergarten programs rated their abilities significantly higher, had higher expectations for success on academic tasks, and*

were less dependent on adults for permission and approval."[2]

Seat work, worksheets, and early instruction in reading or other academic areas are inappropriate for any kindergarten program. Developmentally appropriate, child-centered activities should be used instead in an all-day kindergarten program (Rothenberg, 1995).

These activities should:

---integrate new learning with past experiences through project work and through mixed-ability and mixed age grouping (Drew and Law, 1990; Katz, 1995) in an unhurried setting;

---involve children in first hand experiences and informal interaction with objects, other children, and adults (Housden and Kam, 1995);

---emphasize language development and appropriate preliteracy experiences;

---work with parents to share information about their children, build understanding of parent and teacher roles, emphasize reading to children in school and at home, and set the stage for later parent-teacher partnerships;

---offer a balance of small group, large group, and individual activities (Katz, 1995);

---assess students' progress through close observation and systematic collection and examination of students' work, often using portfolios and;

---develop children's social skills, including conflict resolution strategies.

Recent research supports the effectiveness of full-day kindergarten programs that are developmentally appropriate. Full-day programs have both academic and behavioral benefits for young children. Researchers feel that a full-day program provides a less hectic instruction and is able to meet the needs of the students. While the length of the school day is an important issue of the kindergarten experience, other important issues may include the nature of the kindergarten curriculum and the quality of teaching (Rothenberg, 1995).

> *"Proponents of the half-day approach believe that given the 5 year olds attention span, level of interest, and home ties, a half-day offers ample time in school and allows more time for the young child to play and interact with adults and other children in a less structured home or childcare settings."*[3]

Many prefer half-day because they feel that a half-day program can provide a high quality educational and social experience for children while slowly orientating them to school. The following studies can support this belief.

An experimental study was conducted in 1990 in a large metropolitan school system. The purpose of the study was to determine differences between the 326 students after a full-day kindergarten program and the 311 students after a half-day kindergarten program. Data was obtained from six measures of academic achievement from the California Achievement Tests in the Spring. The six measures that were tested were; visual recognition, sound recognition, vocabulary, comprehension, language expression, and mathematics concepts and applications. Half of the schools in this study were designated as Chapter I schools and the other half were from schools in affluent areas.

Of the six achievement comparisons there were no significant differences between the groups on four of the measures. Significant differences were found in comprehension and mathematics concepts and applications. However, on further investigation, it was determined that the difference in the comprehension subtest was due to girls in the half-day program scoring higher than boys in the full-day program and could not be attributed to the differences in the two programs (Holmes, McConnell, 1990).

A pilot study in Texas compared kindergarten children in urban, rural, and suburban classrooms on the Boehm Test of Basic Concepts

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and the Metropolitan Readiness Test. No significant difference were found between children who were in the half-day or full-day kindergarten programs (Schmidt, 1992).

Another pilot study was done in New Albany, Indiana to look at the impact of full-day versus half-day, and programs on the developmental and academic achievement levels of educationally at-risk children. The day-to-day curricula was evaluated using the Early Childhood Environment Rating Scale (Hurms and Clifford, 1980) to determine if the programs were similar. In September and May of the school year, the Developmental Checklist of the Work Sample System (Jablon, Marsaen and Meisels, 1993) was administered by the teachers. It consisted of items in these seven domains; personal and social development, language and literacy, mathematical thinking, scientific thinking, social studies, the arts, and physical development. Gains by each student were recorded. The demographic data was also used in this study.

The results of this study revealed few differences in the demographic data for the children in both the full-day and half-day programs. No significant differences were found between the 2 groups on any of the assessment measure. The mean gains on the Peabody Picture Vocabulary Tests were slightly more for the half-day program. There were no differences found by the teacher formulated checklist as well as in all seven domains of the work sampling system (Nunnelly, 1996). A further study with a much larger sample was recommended. It is obvious to most, that the quantity of time spent in school is

far less significant than the quality of the kindergarten experience. By examining the advantages and disadvantages of the different kindergarten programs in terms of quality also suggests strategies for improvement. The possibility that a child could receive more individualized help, is insufficient. It must actually occur in order for a kindergartner to gain benefits (Jalongo,1986). The major challenge facing kindergarten is to provide developmentally and individually appropriate learning environments for all kindergarten children so that they are prepared for first grade.

In response to changes in society such as parents' working, children's exposure to television, and many children's pre-kindergarten experiences, full-day kindergarten programs have increased greatly in the past decade. However, Dominic F. Gullo cautions,

> *"All-day kindergarten has the potential of being either a blessing or a bane for young children. This will depend on which type of pressures prevail in influencing the development of the all-day kindergarten program."*[4]

In this controversial issue, it is necessary for parents, teachers, administrators, and experts in primary education to set their differences aside, and stop molding the children to fit the schools, and start molding the schools to fit the needs of the children.

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Appendix

Sight Word Scores of Half-Day Kindergarten Sample

Scores out of 100

98	97	31
99	100	100
44	50	93
92	59	53
59	11	29
100	100	100
21	100	89
98	94	98
100	8	85
35	100	100
94	92	97
95	100	71
97	59	53
33	93	42
60	81	44
79	82	100
100	27	99
88	70	71
62	89	72
81	87	89
92		

Sight Word Scores of Full-Day Kindergarten Sample

Scores out of 100

99	28	96
95	100	94
98	100	100
95	90	75
94	97	77
95		

Readiness Inventory Scores of Half-Day Kindergarten Sample

Scores out of 46

30	33	3
44	44	45
27	22	33
33	33	29
37	0	19
42	43	45
16	44	37
38	39	41
43	7	27
26	42	44
41	36	40
25	46	27
38	25	0
0	28	7
26	25	5
24	11	40
45	5	36
33	36	25
23	35	28
25	42	24
36		

Readiness Inventory Scores of Full-Day Kindergarten Sample

Scores out of 46

41	17	36
32	45	41
41	46	46
24	35	29
29	44	20
41		

DSA Scores of Half-Day Kindergarten Sample

Scores out of 5

4	4	2
4.5	4.5	4.5
3	3	4
4	4	4
3.5	2	2
4.5	5	5
1	5	3
4	3.5	4
4	1	4
3.5	4	4
3.5	3.5	4.5
4	5	4
3	3	3.5
3	4	3
3	3	2
3	3	4.5
4.5	3	4
3	3	3
3	3.5	3
3	4	4
4		

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DSA Scores of Full-Day Kindergarten Sample

Scores out of 5

4.5	4	4
3.5	4.5	3
4	5	5
3.5	4.5	3.5
3.5	4.5	4
4		

Running Record Scores of Half-Day Kindergarten Sample

Percentage of Accuracy

100	99	80
99	100	99
80	75	99
98	99	96
80	50	66
100	100	100
50	100	92
95	94	94
97	50	90
66	97	97
90	95	99.5
96.5	99.5	75
98.5	89	66
66	92	75
87.5	95	50
92	90	99
99	50	99
92	87.5	92
80	95	86
80	99	90
97		

Running Reord Scores of Ful-Day Kindergarten Sample

Percentage of Accuracy

100	85.5	99
95	100	97
94	99.5	99.5
93.5	93	80
95	100	90
95		

Comprehension Score of Half-Day Kindergarten Sample

Percentage of correct responses

100	100	100
100	100	50
100	100	100
100	100	100
75	100	100
100	100	100
50	100	75
100	100	100
100	50	100
75	100	100
75	50	100
75	100	50
100	100	0
25	100	75
75	100	50
100	75	100
75	50	100
100	100	100
100	100	100
100	100	100
75		

Comprehension Score of Full-Day Kindergarten Sample

Percentage of correct responses

100	100	100
100	100	100
100	100	100
100	100	100
100	75	100
50		

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